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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,769	03/11/2004	Kyle A. Ray	CON26 P-306	6436
277	7590	04/27/2006	EXAMINER	
PRICE HENEVELD COOPER DEWITT & LITTON, LLP			MATZEK, MATTHEW D	
695 KENMOOR, S.E.			ART UNIT	
P O BOX 2567			PAPER NUMBER	
GRAND RAPIDS, MI 49501			1771	

DATE MAILED: 04/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/798,769	Applicant(s) RAY ET AL.	
	Examiner Matthew D. Matzek	Art Unit 1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-18,20 and 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-18,20 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

1. The amendment dated 2/13/2006 has been considered and entered into the Record. Claims 1-14 and 19 have been canceled. Claims 15-18, 20 and 21 are instantly pending. The rejections of canceled claims 1-14 and 19 have been withdrawn. The provisional double patenting rejection in view of Application 10/798,769 has been withdrawn due to the Terminal Disclaimer filed 2/13/2006.

Claim Objections

2. Claim 15 is objected to because of the following informalities: the use of metric and US units of measure (i.e., grams per square foot). Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 15-18, 20 and 21 are rejected under 35 U.S.C. 103(a) as unpatentable over Copperwheat (US 6,008,149) in view of Ramesh et al. (US 2003/0219582) as set forth in the Office Action dated 12/14/2005.

a. Copperwheat teaches an article comprising a thermoformable fabric (barrier layer) and a layer of variable compression fabric (absorber layer) (Abstract). The absorber layer comprises polyester fibers and is folded into a vertically-lapped fabric of a basis weight of $\sim 63 \text{ g/ft}^2$ and a thickness of 20mm (col. 5, lines 9-19, conversion done by Examiner). The barrier layer may have basis weights of between ~ 13 and $\sim 57 \text{ g/ft}^2$ and

may also be made of polyester (col. 4, lines 1-12, conversion done by Examiner). An intermediate adhesive fabric may be placed between the absorber and barrier layers (col. 2, lines 43-44). The barrier layer may be a needlepunched felt (col. 4, lines 13-15). The article of Copperwheat may be used as an automobile liner or headliner (claims 19 and 20). Automobile liners and headliners are subject to extreme heat and cold and serve to insulate the vehicle's passengers from exterior sound. As the article of Copperwheat is thermoformable and meets the structural and compositional limitations set forth in claim 1 the article may serve as a molded acoustic panel. Copperwheat teaches the use of an intermediate adhesive fabric may be placed between the absorber and barrier layers, but is silent to the use of a continuous polyolefin film layer (col. 2, lines 43-44).

b. Ramesh et al. teach a sound and moisture vapor barrier comprising a foam layer (absorber layer) and a film layer (Abstract). By laminating the film layer to the foam layer the sound transmission is drastically improved and the film acts as a moisture vapor barrier [0032-3]. The film may be made of polyolefins [0034]. The polyolefin film of Ramesh et al. is necessarily continuous in order for it to function as a moisture vapor barrier.

c. Since Copperwheat and Ramesh et al. are from the same field of endeavor, (ie. sound insulative articles), the purpose disclosed by Ramesh et al. would have been recognized in the pertinent art of Copperwheat.

d. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the adhesive fabric of Copperwheat with a polyolefin film layer. The skilled artisan would have been motivated by the ability to use the

polyolefin film layer as an adhesive layer, taught by Copperwheat, and impart impermeability to the automobile liner. This would be highly advantageous to an article for use in automobiles as vehicles are often exposed to the elements. The interior of an automobile must be resistant to or protective against exposure to the elements because each time a window, door, sunroof, etc. is opened the environmental elements of the automobile's surroundings enter the vehicle and affect its interior. The desire for the invention of Copperwheat is directed to protection against rain, sleet and snow that will inevitably enter the car.

e. Although Copperwheat does not explicitly teach the claimed feature of the barrier layer having an airflow resistance from about 200 to about 300 Rayls or less than 100 Rayls, it is reasonable to presume that said properties are inherent to Copperwheat. Support for said presumption is found in the use of like materials (i.e. a barrier layer of common materials and basis weights). The burden is upon Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of barrier layer having an airflow resistance from about 200 to about 300 Rayls or less than 100 Rayls would obviously have been present one the Copperwheat product is provided. Note *In re Best*, 195 USPQ at 433, footnote (CCPA 1977) as to the providing of this rejection made above under 35 USC 102.

f. Although Copperwheat and Ramesh et al. do not explicitly teach the claimed feature of the polyolefin film having an airflow resistance not less than 5000 Rayls, it is reasonable to presume that said property is inherent to the combined article of Copperwheat and Ramesh et al. Support for said presumption is found in the use of like

materials (i.e. a polyolefin film for use in a sound and moisture vapor barrier). The burden is upon Applicant to prove otherwise. *In re Fitzgerald* 205 USPQ 594. In addition, the presently claimed property of the polyolefin film having an airflow resistance not less than 5000 Rayls would obviously have been present one the combined article is provided. Reliance upon inherency is not improper even though rejection is based on Section 103.

Response to Arguments

4. Applicant's arguments filed 2/13/2005 have been fully considered but they are not persuasive.
5. Applicant argues that the prior art provides no motivation to have a moisture barrier for an automobile headliner. Examiner has provided the motivation in the for the combination of the Copperwheat and Ramesh et al. articles in the Office Action dated 12/14/2005. Along with this motivation Ramesh et al. teach that the use of the resin film provides the article with dramatically improved sound transmission loss [0032].
6. Applicant argues that the use of an impermeable layer between the formable fabric layer and the variable compression fabric layer is inconsistent with the embodiments of Copperwheat. However later states that the second general embodiment of Copperwheat teaches the use of an adhesive layer between the variable compression layer and the formable fabric layer. Examiner takes the position that the use of an impermeable film will have a multi-faceted improvement over the binding fibers of Copperwheat. The impermeable film layer of Ramesh et al. would improve Copperwheat's acoustic properties [0032, Ramesh et al.] and it would also serve as an adhesive layer between the barrier layer and the absorber layer as it is heated during the

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disclosed creation process of Copperwheat. This adhesive bonding using the impermeable polyolefin film of Ramesh et al. would replace the adhesive functionality of the thermoplastic bonding fibers as taught by Copperwheat.

7. Applicant argues that Copperwheat does not suggest that the adhesive layers are a film, thermoplastic or impermeable. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The Ramesh et al. reference has been relied upon for the teaching of the impermeable polyolefin film layer, not Copperwheat.

8. Applicant argues that Copperwheat teaches away from using impermeable adhesive layers because it discloses that the adhesive layers are used for “enhancing contact and cohesion between formable fabric layer and variable compression layer” and that an impermeable layer would not facilitate this end. Examiner disagrees with this interpretation. The use of any material, film or fiber, between two layers would not enhance “contact and cohesion” by increasing the amount of surface area contacted between the formable fabric layer and the variable compression layer, because its physical location would be between the two layers. Instead it would improve the adhesion between the two layers by serving in a cohesive manner adhesively bonding the formable fabric layer and the variable compression layer. A film would better facilitate this end by its increased surface area relative to a grouping of fibers.

9. Applicant argues that there is no evidence on record suggesting that moisture or vapor barriers can be advantageously employed in an automobile headliner. Applicant also argues that

it is inconceivable that a headliner would be exposed to rain and/or snow as suggested by Examiner. As pointed out by Applicant the polyolefin film of Ramesh et al. serves to improve its article's acoustical properties, which is the same motivation provided by Applicant. Also headliners are subject to environmental conditions in automobiles such as jeeps and convertibles. Therefore, it would be advantageous to have a moisture and vapor barrier incorporated in the headliner to prevent it damage during and following its exposure to environmental conditions.

10. Applicant argues that while Ramesh et al. do recognize that the polyolefin film improves its sound attenuation properties, however the reference does not recognize this as a primary benefit and do not correlate sound attenuation properties with film impermeability, a necessary characteristic of a vapor or moisture barrier. As stated in abstract of Ramesh et al. the film serves as a vapor barrier and improves its sound attenuation properties. The correlation between the film's impermeability and its resultant properties need not be taught as long as it exhibits the claimed properties.

11. Applicant argues that Ramesh et al. do not teach or suggest that the sound attenuation properties of an impermeable polymer film could be advantageously used in an entirely different structure in which the film is disposed between fibrous layers than attached to a polymer foam layer. The inventions of Copperwheat and Ramesh et al. are both from the same field of endeavor (i.e. sound insulative articles). Therefore, the purpose disclosed by Ramesh et al. would have been recognized in the pertinent art of Copperwheat.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

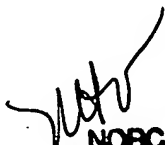
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzek whose telephone number is (571) 272-2423. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mdm

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PRIMARY EXAMINER